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A Dissertation on Cholera Infantum

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In the vast catalogue of diseases which are incident to the human frame, there are none, which are better calculated to excite our sympathies, or demand more careful medical treatment than those peculiar to the period of infantile life. Among the most important of these is

Cholera Infantum;

a disorder on which very little has been said by the medical writers, either of Europe or of our own country. It is really surprising, that the Physicians of the United States should be so silent with regard to a disease, which has annually caused such devastation in our cities.

In Philadelphia it has for a number of years past been productive of considerable mortality.

The following is a statement of the number of deaths which have occurred within the last ten years, as furnished me by my friend Dr. Burden: in 1819 under One year 147 — From One to Two years 75. — From Two to Five, 20 = 242.

In 1820, under

One year 143.— From One to Two years 89.
From Two to Five 15 = 247. Making in Two Years
the immense number of 492 from this disease
alone, which is sufficient to establish its
great importance, and excite us to use every
exertion to lessen its fatality.

Cholera Infantum.

Cholera Infantum is a disease which in the United States is very prevalent, and attended with considerable mortality during the hot summer and autumnal months. It is for the most part confined to large towns, and in this city is well known by the common name of the Summer complaint. In Charleston, South Carolina, it is named the April and May disorder * from its appearing in those months. In Philadelphia it usually begins to shew itself sometimes in June, and continues its ravages untill the cool weather of October arrests its career — it may however occur earlier, or be protracted to a much later period.

Children are most liable to be attacked by this disease from the 5th month untill the close of the second year. It commences with symptoms of pyrexia, loss of appetite, nausea, and sometimes vomiting, without purging, though more commonly the purging appears first, most generally however it comes on with violent purging and

* Vide. Dr Rush's 2nd Vol. Med: Inquiries.

vomiting together.

The matter evacuated is at first considerably mixed with bile, and of a green or yellow colour. The stools however soon lose their bilious character, and become watery, or mucous. Occasionally the mucus is mixed with a whitish pulpy substance, with here and there a few streaks of green or yellow matter. Sometimes they are white; at other times considerably tinged with blood. The natural fæces seldom appear; when they do it is in the form of scybala. Generally the stools are large and exceedingly offensive, but in some instances are free from smell, and consist principally of the aliment as taken in, which has passed away very little changed. Worms are frequently discharged throughout the disease.

The accompanying fever is of a remittant character, the exacerbations occurring more particularly

in the evening, and remissions in the morning. The pulse is weak, quick, and irritated, though in the commencement of the disorder it is sometimes full. The temperature of the surface is unequal. The head and body are hot, while the extremities are cold. The skin is dry, "and has a shrivelled look particularly on the inside of the thighs which are remarkably shrunk and wasted;" The tongue is white; great thirst attends throughout the disease; a swelling of the abdomen, and also of the face and limbs often takes place.

The child in many instances appears to suffer acutely; his feet and arms are drawn towards the abdomen, he starts frequently, and cries almost incessantly. In some cases there is so great a determination to the brain as to cause delirium, and even phrensy: Sometimes the system is so insensible "that flies have been seen to alight on the eyes without exciting a motion in the eyelids to remove them." *

* Vide. Dr. Rush's 2nd Vol. Med: Inquiries.

The purging commonly remains without the vomiting the stools frequently amounting to twenty and even thirty in a day. They are often accompanied with severe tormina and tenesmus.

The duration of the disease is various, depending much on the manner of its attack, the habit, season of the year, vicissitudes of weather, &c. A hot and dry atmosphere will generally increase the violence of the disease, while a cool day will often lessen its force and dispose it to a favourable termination. Sometimes it is so violent and rapid in its progress, that it carries off the child in one day; while at other times it continues with occasional changes for several weeks, and even months, when great emaciation, the dull sunk eye, contracted features, livid spots, a sore mouth, singultus, convulsions, and a strongly marked hippocratic countenance, generally denote that Death is about to terminate the sufferings of the infant.

Post Mortem Examinations shew marks of inflammation throughout a considerable portion of the alimentary canal. Upon the mucous coat of the Stomach and small intestines, especially of the duodenum, near the pylorus, dark livid spots are to be met with. The Liver is usually much enlarged, though very little changed in structure. In protracted cases effusions are sometimes discovered in the brain. Mucus is found in considerable quantity in the bowels, and occasionally small lumps of indurated fæcal matter. The Spleen and Pancreas, though rarely, have been seen in a diseased state.

"The Predisposition to Cholera Infantum, consists in the debility induced by the operation of the heated and impure air of Large Cities." *

The disease is excited into action by, certain ingesta, offensive either from quality or quantity.

* Vide. Dr. Chapman's Lectures.

Improper Clothing;

Dentition. This has been objected to as a cause of this disease, but that it is such, is, I think sufficiently evident, for of those who die, a large number suffer during teething, hence it is that the Second Summer (the most pressing period of dentition) is considered as a most important period of infantile life.

Worms, These also have been objected to as a cause of Cholera Infantum, but that they do, by their presence in the alimentary canal, excite and aggravate this disease; is, I believe, a fact pretty well established. There is indeed (says Doctor Chapman) scarcely a complaint which these animals will not excite or imitate. *

By some physicians the Liver is considered as the original seat of Cholera Infantum, but a more correct theory of the disease, which is supported by its causes, phænomena, &c, and one which I shall

* Vol. Therapeutics.

adopt, is that it is primarily a gastric affection, the Hepatic system being only sympathetically affected. The first effect is an increased secretion of bile, the Liver however soon becomes enlarged and its functions wholly or in a great measure suspended.

Treatment.

Commonly the first step in the cure of Cholera Infantum is to evacuate the alimentary canal by means of purgatives, but in severe cases, where the stomach is extremely irritable these medecines would be almost immediately rejected. Here we should first endeavour to tranquilize the stomach, and for this purpose, Lime Water, or Seltzer Water, Anodyne Injections, Fomentations of the abdomen, or the Warm Bath, should be employed. When along with the vomiting, there is much pain, and the febrile symptoms are considerable, great advantage will be derived from the exhibition of a mild emetic, as the Ipecacuanha; it not only relieves the stomach of its offensive contents, but leaves it,

greatly invigorated, and at the same time by inducing diaphoresis, abates the fever, and takes off the determination from the alimentary canal.

Bloodletting when well regulated in this disease, is productive of the greatest benefit, it obviates any tendency to inflammation, calms the stomach, and quiets the general system.

When the irritation of the stomach is allayed, and it is rendered fit for the reception of purgatives, they should be recurred to. A variety of these medecines have been used, as the Rhubarb, Manna, Magnesia, Castor Oil, &c. The latter in the form of the oleaginous mixture, in mild cases answers very well. Calomel however, either alone, or combined with Opium, is infinitely better adapted to the treatment of Cholera Infantum than any of the other purgatives; I have seen the combination of Calomel and Opium given in several cases with beneficial results, where Castor Oil, and other medecines, given with the same view, had been rejected. For its introduction as a

remedy in the treatment of this disease, we are indebted to the late Dr. Miller of New York, who originally employed it in a severe case attended with "dysenteric symptoms." * The dose of this medecine should be adapted to the age of the child and to the peculiarities of the case.

When the noxious contents of the alimentary canal are completely discharged, the purges should be discontinued. The indication now is to allay the intestinal irritation and excite the healthy action of the Liver. Here Calomel given in doses of, one sixth of a grain combined with about the same proportion of Opium and Ipecacuanha, is highly useful. It allays the irritation, procures a secretion of bile and improves the general condition of the patient. The dose should be repeated every two, or three hours as the circumstances of the case may require. Where the evacuations are frequent and painful, Anodyne Injections should be used.

* Vide. Dr Millers paper. 1st Vol. Med. Repos. N.Y.

The Warm Bath in this disease is exceedingly useful. It cleanses and softens the skin, and by exciting an increased action of the extreme vessels, equalizes the temperature of the surface. When there is great debility Cayenne pepper, or mustard, or brandy or some other stimulating article should be added.

Blisters by taking off the determination from the alimentary canal are attended with the best effects; they may be applied either to the abdomen or extremities as the case may require.

Fomenting the belly with an infusion of bitter herbs, or the application of cloves placed in a flannel and wrung out of brandy to the abdomen, will be found useful to check the vomiting.

In cases of great prostration with considerable vomiting Dr. Attee of this City has derived much advantage from the application of the volatile oil

of Monarda Punctata, or Horse mint, in combination with Tincture Saponis to the abdomen and lower extremities. I should suppose that the internal use of this oil, would be found beneficial to allay obstinate vomiting.

To equalize the temperature, and lessen the morbid heat of the surface, it has been recommended to sponge the body of the patient several times a day with cool water, or vinegar and water, or salt and water, and envelope the extremities, which, in this disease are below the healthy standard, in flannel. It is also said that cold water injected into the bowels produces very powerful effects, operating "as an anodyne, sedative and antispasmodic." * By Cleghorn it is observed that the Spanish physicians derived great advantage from the free use of cold water as a drink in the most "violent, deplorable cholera." +

When the febrile symptoms are reduced, and

* Vid. Dr. Millers paper 1st Vol. Med. Repos. N. York
+ Cleghorn Dis. Minorca.

the disease has assumed the form of Diarrhœa, attended with Tenesmus and severe gripings, injections composed of Starch and Laudanum will be found very effectual. The cretaceous and alkaline preparations, the spiced Rhubarb, and the Oleaginous mixture will also be found useful remedies in this stage of the disease.

When the painful symptoms have in a great measure subsided, and a simple Diarrhœa is left, astringent medicines are indicated to restrain the profuse evacuations. Allum it is said proves serviceable in this case; it is usual to combine it with a minute portion of Opium. The Colomba is a remedy of great merit, it may be given either in powder or infusion. The Logwood is an important medicine in the treatment of this stage of Cholera Infantum, is much relied on by Dr. Physick, and is pretty generally prescribed by the physicians of this city. A strong infusion of the Dewberry root

is highly recommended by Doctr Chapman. During the last summer I had the satisfaction of witnessing its efficacy in several cases, and believe it to be decidedly preferable to all the other astringents — it is more effectual, and at the same time is pleasant to the taste of the patient.

It is however pretty generally agreed by physicians that the most effectual remedy is a change of air. The patient should be removed from the unwholesome atmosphere of the city to the cool and salubrious air of the country; but where the circumstances in life are such as to prevent a removal to the country, the child should be taken out of the city daily. Much advantage will also accrue from exposing the patient to the river air.

The diet, if the child be not weaned, should be

the milk of the mother; if weaned, the farinaceous substances, as the Tapioca, Sago, Powdered Rice, Arrow Root, &c with a proper proportion of Sweet Milk. In the Chronic stage a little Salt meat, or Fish, may be allowed.

Before I conclude this essay I shall mention those means which are best adapted to prevent the occurrence of the disease.

1st. The Child should not be weaned within the year.
2nd. The Cold, or Warm Bath should be used daily.
3rd. Flannell should be worn next the Skin, and Worsted Stockings upon the legs.
4th. The Diet should be well regulated, and consist of milk and the farinaceous articles; ripe fruits in moderate quantity may be permitted.
5th. The Gums, if swollen or inflamed during teething, should be lanced.
6th. The Child should be sent to the country before the approach of warm weather, "or be carried once

or twice a day out of town or over the river, so that he be exposed to the pure air."